

REMARKS

By the present amendment, claims 1-4 and 6 to 11 are pending in the application.

Support For Claim Amendments

Claim 1

Support for the amendment to independent claim 1, said selected portions having a width not less than the diameter of said metal balls, may be see in Fig. 2(b) and Fig. 3 of the drawings and the specification at page 6, lines 8-10.

Claim 10

Dependent claim 10 has been amended to use more clear language in response to the rejection under 35 U.S.C. §112, second paragraph.

§112, ¶2

Claim 10 was rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

In response to this rejection, claim 10 has been amended by the present amendment.

It is submitted that it is clear in amended claim 10 that the ball metal cannot be intervening between the substrate metal and the ball metal.

In view of the present amendment, it is respectfully requested that the rejection under 35 U.S.C. §112, second paragraph, be withdrawn.

§102/§103

Claims 1 and 2 were rejected under 35 U.S.C. §102(b) as being anticipated by EP 582375 to Boyd et al.

Claims 3, 4, 6-8, 10 and 11 were rejected under 35 U.S.C. §103(a) as being unpatentable over EP 582375 to Boyd et al. in view of U.S. Patent No. 5,765,744 to Tatum et al. and U.S. Patent No. 5,492,266 to Hoebener et al.

Claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over EP 582375 to Boyd et al. in view of Japan No. 63-232360 to Kaneda et al.

These rejections, as applied to the amended claims are respectfully traversed.

Patentability

Independent claim 1, as amended, is patentably distinguishable over Boyd and the other reference by the feature of the present invention that the metal balls of the present invention have a diameter of 60 to 150 μm and, said selected portions (of a substrate for mounting electronic devices) having a width not less than the diameter of said metal balls. That is, the width of the selected portions is greater than the diameter of the metal balls.

Fig. 3 and Fig. 4 of Boyd clearly show that the solder particles or balls 220 of Boyd have a diameter which is larger than the width of the metal contacts 203.

None of the cited references disclose or suggest -- said selected portions having a width not less than the

diameter of said metal balls-- as required by amended independent claim 1.

It is therefore submitted that amended independent claim 1 is patentable over EP 582375 to Boyd et al.

Since independent claim 1 is patentable; claims 2-4 and 6-11, which depend from claim 1, are patentable.

Dependent claim 10 is further patentable because Hoebener does not disclose or suggest a metal layer intervening between the substrate and the plated layer formed by reflowing the metal balls wherein the metal of the intervening layer is different than the metal of the substrate and the metal of the metal balls. Col. 1, lines 13 to 16 of Hoebener does not disclose or suggest this different intervening metal layer. Fig. 5 of Hoebener only discloses Sn-Pb solder located between Cu and Sn-Pb solder.

CONCLUSION

It is submitted that in view of the present amendment and foregoing remarks, the application is now in condition for allowance. It is therefore respectfully requested that the application be allowed and passed to issue.

Respectfully submitted,

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